Docket No.: KUCKELSBERG
Serial No.: 08/727,374

CLEAN VERSION OF AMENDED CLAIMS:

2. (Twice Amended) A linear synchronous motor comprising:

a) at least one primary part (1) and at least one secondary part (6);

b) the secondary part (6) has a sequence of poles (10) formed by permanent magnets;

c) the length of the secondary part (6) is greater than the length of the primary part (1) in the movement direction (5),

d) the primary part (1) has primary part slots (9) which are suitable for holding monophase or polyphase windings,

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e) the primary part (1) has means which lead to a change in the magnetic force in the movement direction (5) of the linear motor in the region of the end pieces (2) of the primary part (1), and

f) the end faces (14) of the end pieces (2) extend perpendicular to the movement direction (5) of the linear motor,

wherein the air gap between the end pieces (2) and the secondary part (6) changes gradually within a single pole pitch so as to realize a continuous increase or decrease in the magnetic force in the movement direction (5) of the linear motor in the region of the end pieces (2) of the primary part (1).

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8. (Amended) A linear synchronous motor, comprising:

at least one primary part defined by a length and having slots for receiving monophase or polyphase windings, said primary part having end pieces extending perpendicular to a direction of movement of the linear motor;

at least one secondary part having a series of poles formed by permanent magnets, said secondary part defined by a length which is greater than the length of the primary part in a direction of movement of the linear motor; and

means, associated to the primary part, for changing the magnetic force in the direction of movement of the linear motor in the region of the end pieces of the primary part,

wherein an air gap between the end pieces and the secondary part changes gradually within a single pole pitch so as to realize a continuous increase or decrease in the magnetic force in the movement direction of the linear motor in the region of the end pieces of the primary part.